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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,626	02/04/2005	Martin Sandal Nielsen	PGR-4-PCT-US	3035
22827 7590 03/21/2007 DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			EXAMINER NGUYEN, SIMON	
			ART UNIT 2618	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/500,626

Applicant(s)

NIELSEN ET AL.

Examiner

SIMON D. NGUYEN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 14-18 and 20-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-18, 20-29 and 31-42 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-18, 20, 22, 26, 28-29, 31-35, 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmaier et al. (5,471,503) in view of Wakayama et al. (6,212,221).

Regarding claim 14, Altmaier discloses a system for transmitting a frequency hopping, comprising: a master unit (transmitting station) for transmitting a packet data on the FH (fig.4, column 6 line 55 to column 7 line 8); a slave unit for scanning the transmitted FH channel (fig.5, column 7 lines 26-49), wherein the signal transmitted by the master unit defining a preamble having a length corresponding at least to the time required for said at least one slave unit to test said channels, and wherein the slave unit performs the step of testing said channels for a transmitted signal by testing said preamble for a predefined characteristic indicating to the slave unit that the message originates from the master unit related to the same system (figs. 6,8, column 8 lines 32-67, column 10 lines 17-34, claim 3). However, Altmaier fails to specifically disclose detecting a vacant channel.

Wakayama discloses a frequency hopping transmission system between master and slave units (column 2 lines 53-67, figs. 2, 6, 7, 8-11, 26), wherein the master unit detects a vacant (empty) channel in a plurality of channels for use in transmitting to the slave unit (column 33 lines 36-48). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Altmaier, modified by Wakayama to allocate an available channel to be used in a packet data transmission in order to reduce time for a receiver to scan within a particular frequency group as well to prevent frequency interferences.

Regarding claims 20 and 35, these claims are rejected for the same reason as set forth as method of claim 14.

Regarding claims 15-16, 28, 31, 32, 42, Altmaier further discloses the receiver (slave) detecting the predefined characteristic, interrupting the scanning, and performs the test of the received message for an address, performing a scanning of the channels (column 9 lines 5-10, column 11 lines 7-19, column 13 lines 1-3, figs. 6, 8, column 7 line 30 to column 8 line 57). It should be noted that Altmaier disclosing the slave unit stops scanning the transmission signals when it detects a correct signal (column 9 lines 5-8), which means if it is not a correct signal, the slave unit resumes the scanning which is obvious to one skilled in the art.

Regarding claim 17-18, Altmaier further discloses the receiver (slave) for sequential scanning all channels in the frequency hopping (predefined algorithms) ((column 9 line 5-10, column 11 lines 7-19, column 13 lines 1-3, figs. 6, 8, column 7 line 30 to column 8 line 57).

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Regarding claim 22, Altmaier further discloses wherein the plurality of transmission channels (fig.3).

Regarding claims 26, 40, Altmaier further discloses the slave unit (receiver) scanning the received channels in sequential order (column 7 lines 9-54).

Regarding claims 29, 41, Altmaier further discloses the specific characteristics are a symbol, a bit sequence, number of bytes, content (column 10 line 10 to column 11 line 34).

Regarding claim 33, Wakayama further discloses waiting for responsive from the slave unit (column 29 lines 25-29, 63-65).

Regarding claim 34, Wakayama further discloses detecting the available channel used in the frequency hopping between the master and slave unit is resumed (column 40 lines 39-40).

3. Claims 21, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmaier et al. (5,471,503) in view of Wakayama et al. (6,212,221), and further in view of Cooper (2002/0123325).

Regarding claims 21, 36, in the modified Altmaier, Wakayama further discloses the FH used for transmitting a control signal (column 18 line 10). However, the modified Altmaier does not specifically disclose the FH signals used for transmitting a request signal and an interrogating signal.

Cooper discloses a communication system use FH signals for transmitting a request signal (paragraph 16), a control signal (paragraph 22) as well an interrogating

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signal (paragraphs 32-33). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified Altmaier, modified by Cooper to apply the FH signal in a tag's interrogator, and a requesting signal in order to improve the FH signal in different fields of communication.

4. Claims 23-25, 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmaier et al. (5,471,503) in view of Wakayama et al. (6,212,221), and further in view of Treister et al. (2002/0116460).

Regarding claims 23-25, 38-39, the modified Altmaier does not specifically disclose testing, measuring the vacant channels, and accounting for previous transmissions.

Treister discloses a frequency hopping system, in which a master unit tests and measures available (vacant) channels used for communication between the master and slave units (paragraphs 91, 130, 146, 151, 153, 180), and storing or maintaining data in a look up table for each channel and slave units based on performance and classification (paragraphs 155, 159) which means the master unit accounting for previous transmissions. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified Altmaier, modified by Treister to test all available channel to make sure they are met the requirement in order to prevent the signal interference.

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5. Claims 27, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altmaier et al. (5,471,503) in view of Wakayama et al. (6,212,221), and further in view of Gan et al. (7,027,418).

Regarding claims 27, 37 the modified Altmaier does not specifically disclose repeating testing the channels at the slave unit and both the slave and master units testing for a carrier wave.

Gan discloses a frequency hopping system between a master unit and a plurality of slave units, wherein the slave units repeatedly test received FH channel (column 12 lines 1-3) and wherein both the slave and master units testing for a carrier wave (column 11 line 33 to column 13 line 67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified Altmaier, modified by Gan in order to make sure a received channel intended to a slave unit.

***Allowable Subject Matter***

6. Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 30, the prior art of record fails to teach or suggest the interruption occurs when the predefined system specific characteristic is repeated at least once.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

600 Dulany, Alexandria, VA 22314

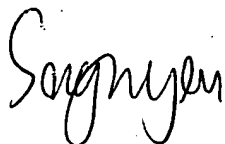
Or faxed to:

(571) 273-8300 (for formal communications intended for entry)

Hand-delivered response should be brought to Customer Service Window located at the Randolph Building, 401 Dulany, Alexandria, VA, 22314.

Simon Nguyen

March 27, 2003

  
**SIMON NGUYEN**  
**PRIMARY EXAMINER**